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ABSTRACT

The study evaluated whether specifically language impaired (SLI) children (N=6 and ages 5-8) manifested atypical or normal but delayed development in their interpretation of PRO (an empty pronomial element which has also been termed "a missing complement subject"). Language samples were taken and analyzed twice over a 9-12 month period. Among conclusions were: some SLI children may manifest developmental stages characteristic of normally developing children; these children may go through the same developmental stages but at later ages; longer time intervals are required for change and response patterns may be unstable for this population; for some SLI children, mixed and unclassifiable response patterns may persist into early childhood; and there is a need for a large scale study of SLI children's interpretation of PRO. (Includes 20 references.) (DB)

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F2-PS29 #32

LANGUAGE IMPAIRED CHILDREN'S INTERPRETATION OF PRO: A LONGITUDINAL STUDY

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INTRODUCTION

PURPOSE: TO EVALUATE WHETHER SPECIFICALLY LANGUAGE IMPAIRED (SLI) CHILDREN MANIFEST ATYPICAL OR NORMAL BUT DELAYED DEVELOPMENT IN THEIR INTERPRETATION OF PRO (AN EMPTY PRONOMINAL ELEMENT WHICH HAS ALSO BEEN TERMED "A MISSING COMPLEMENT SUBJECT").

GENERAL DEFINITION OF SLI POPULATION: CHILDREN WITH SEVERE PROBLEMS IN THE COMPREHENSION AND/OR PRODUCTION OF LANGUAGE WHO HAVE NORMAL INTELLIGENCE, NORMAL HEARING AND NO EVIDENCE OF SEVERE NEUROLOCIAL DEFICITS (LEONARD, 1979; STARK & TALLAL, 1981).

ALTERNATE LABELS FOR SLI CHILDREN: APHASIC, DYSPHASIC, CHILDHOOD APHASIA, CLINICAL LANGUAGE DISORDERED, LANGUAGE IMPAIRED, LANGUAGE DISABLED, OR LANGUAGE DISORDERED (LEONARD, 1979; STARK & TALLAL, 1981; SCHERY, 1985)

TWO MAJOR POSITIONS REGARDING THE GRAMMARS OF SLI CHILDREN

POSITION 1: QUALITATIVE DIFFERENCE: SLI CHILDREN MANIFEST GRAMMARS WHICH ARE QUALITATIVELY DIFFERENT FROM THOSE OF NORMAL CHILDREN (MENYUK, 1964; LEE, 1966; KIRCHNER & SKARAKIS- DOYLE, 1983).

POSITION 2: DELAYED DEVELOPMENT: CHILDREN MANIFEST GRAMMARS WHICH ARE SIMILAR TO THOSE OF NORMAL CHILDREN BUT DELAYED WITH RESPECT TO EXPECTATIONS BASED ON CHRONOLOGICAL AGE (MOREHEAD & INGRAM, 1976; JOHNSTON, 1988)

A RECENT HYPOTHESIS CONSISTENT WITH POSITION 2: "CHILDREN GIVEN THE LABEL SLI...WILL FORM A CONTINUUM WITH NL (NORMALLY DEVELOPING) CHILDREN WITH SLIGHTLY BELOW AVERAGE LANGUAGE ABILITIES (LEONARD, 1987 P. 34)."

FOCUS OF THE PRESENT STUDY

RATIONALE: IMPORTANT THEORETICAL DEVELOPMENTS (CHOMSKY, 1981, 1982) HAVE PROVIDED A NEW CONTEXT FOR EVALUATING THE QUALITATIVE DIFFERENCE VS DELAY ISSUE.

THEORETICAL QUESTIONS REGARDING THE GRAMMARS OF SLI CHILDREN:

- ARE THE FORMAL PRINCIPLES IDENTIFIED BY CHOMSKY (1981, (1982) PRESENT IN THE GRAMMARS OF SLI CHILDREN?
- HOW DO THESE FORMAL PRINCIPLES OPERATE DURING THE PERIOD WHEN THE CHILD'S GRAMMATICAL SYSTEM IS DEVELOPING?

CONTROL PHENOMENA & THE ROLE OF C-COMMAND

CONSIDER SENTENCES (1) AND (2)

(1) ***THE ZEBRA TELLS THE DEER [ ] TO JUMP OVER THE FENCE***

(2) ***THE ZEBRA TOUCHES THE DEER [ ] AFTER JUMPING OVER THE FENCE***

THE BRACKET INDICATES THAT THERE IS AN EMPTY PRONOMINAL ELEMENT (i.e. an element which does not have phonetic content). THIS ELEMENT IS TERMED PRO.

SENTENCE (1) IS OBJECT CONTROLLED. THE MAIN CLAUSE OBJECT, *THE DEER*, CARRIES OUT THE ACTION OF JUMPING OVER THE FENCE. THUS, *THE DEER* IS THE CONTROLLER OF PRO.

SENTENCE (2) IS SUBJECT CONTROLLED. THE MAIN CLAUSE OBJECT, *THE ZEBRA*, CARRIES OUT THE ACTION OF JUMPING OVER THE FENCE. THUS, *THE ZEBRA* IS THE CONTROLLER OF PRO.

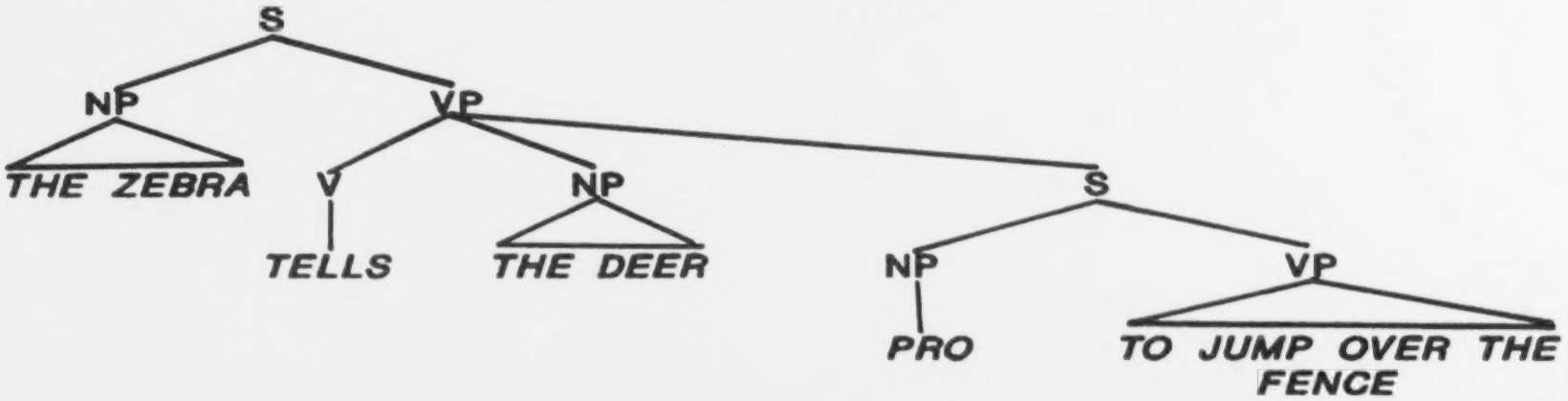
THE PRINCIPLES ACCOUNTING FOR CONTROL:

- THE C-COMMAND PRINCIPLE: ONE NODE C(ONSTITUENT)-COMMANDS ANOTHER IF THE BRANCHING NODE IMMEDIATELY DOMINATING THE FIRST ALSO DOMINATES THE SECOND (REINHART, 1976, 1981).

- THE C-COMMAND CONSTRAINT ON CONTROL: THE CONTROLLER OF PRO MUST BE THE CLOSEST C-COMMANDING NP (GOODLUCK, 1981; HSU, 1981; MANZINI, 1983).

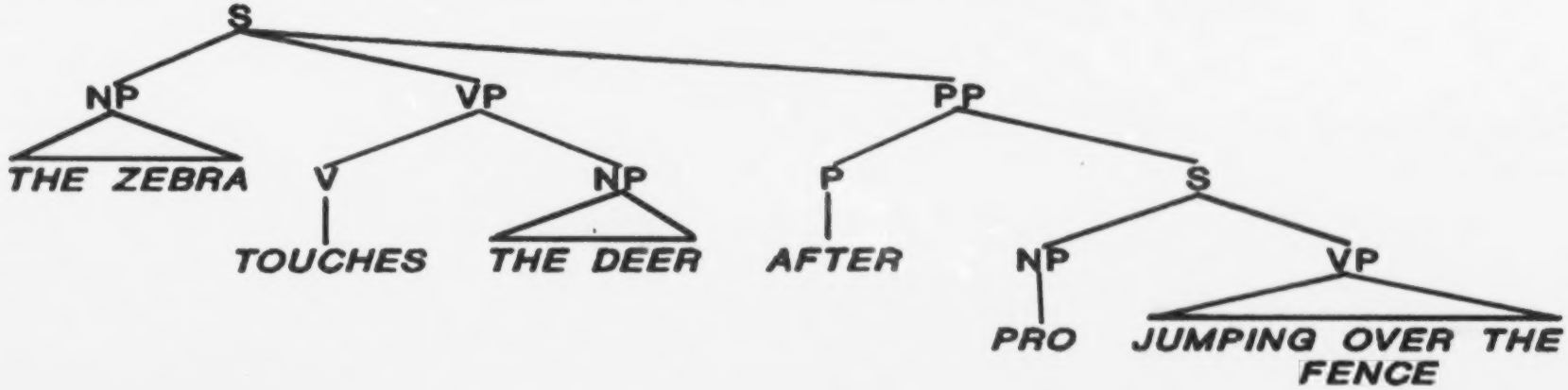
APPLICATION OF THE C-COMMAND PRINCIPLE AND THE C-COMMAND CONSTRAINT ON CONTROL

SENTENCE (1): THE COMPLEMENT (*PRO TO JUMP OVER THE FENCE*) IS ATTACHED TO THE VP AS ILLUSTRATED BELOW



THE OBJECT NP, *THE DEER*, IS IMMEDIATELY DOMINATED BY THE VP NODE WHICH ALSO DOMINATES PRO. THUS, *THE DEER* C-COMMANDS PRO. SINCE *THE DEER* IS THE CLOSEST C-COMMANDING NP, IT IS THE <u>CONTROLLER</u> OF PRO.

SENTENCE (2): THE ADJUNCT (*AFTER PRO JUMPING OVER THE FENCE*) IS ATTACHED TO THE TOPMOST S AS ILLUSTRATED BELOW



THE OBJECT NP, *THE DEER*, IS IMMEDIATELY DOMINATED BY THE VP NODE WHICH DOES NOT DOMINATE PRO. HOWEVER, THE SUBJECT NP, *THE ZEBRA*, IS IMMEDIATELY DOMINATED BY THE S NODE WHICH DOMINATES PRO. THUS, *THE ZEBRA*, C-COMMANDS PRO. HENCE, IT IS THE CONTROLLER OF PRO.

EXPERIMENTAL STUDIES OF NORMAL CHILDREN'S INTERPRETATION OF PRO

USING AN ACT-OUT TASK, TWO CROSS-SECTIONAL STUDIES (HSU, CAIRNS & FIENGO, 1985; HSU, CAIRNS, EISENBERG & SCHLISSELBERG, 1989) REVEALED FIVE STAGES IN CHILDREN'S INTERPRETATION OF PRO. A TOTAL OF 145 CHILDREN WERE TESTED IN THE TWO STUDIES.

- A CLASSIFICATION SYSTEM WAS USED TO IDENTIFY EACH CHILD'S STAGE OF DEVELOPMENT IN THE INTERPRETATION OF PRO.
- THE CHILDREN IN EACH STAGE DIFFERED SIGNIFICANTLY WITH RESPECT TO AGE AND DSS SCORES ($P < .05$ FOR SIGNIFICANCE TESTS DONE IN EACH STUDY).
- PROGRESS THROUGH THE FIVE STAGES SEEMED TO OCCUR BETWEEN 3 AND 7 YEARS OF AGE WITH MANY 4 AND 5 YEAR OLDS MANIFESTING THE INTERMEDIATE STAGES.

STAGES IN THE INTERPRETATION OF PRO BY NORMAL CHILDREN

(FROM THE COMBINED RESULTS OF HSU, ET AL. 1985 & HSU, ET AL. 1989)

STAGE 1: SUBJECT ORIENTED: A PATTERN OF SUBJECT RESPONSES ON SENTENCES SUCH AS (2) AND OBJECT-SUBJECT (OS) RELATIVE CLAUSE SENTENCES SUCH AS (3).

(3) *THE ZEBRA TOUCHES THE DEER THAT IS LYING UNDER THE TREE.*

STAGE 2: OBJECT ORIENTED WITH THE MINIMAL DISTANCE STRATEGY (OBJ/MDP): A PATTERN OF OBJECT RESPONSES ON SENTENCES SUCH AS (2) AND (4).

(4) THE ZEBRA STANDS NEAR THE DEER AFTER JUMPING OVER THE FENCE.

AT THIS STAGE AND ALL SUBSEQUENT STAGES CHILDREN SELECT THE OBJECT NP, *THE DEER*, TO LIE UNDER THE TREE IN (3).

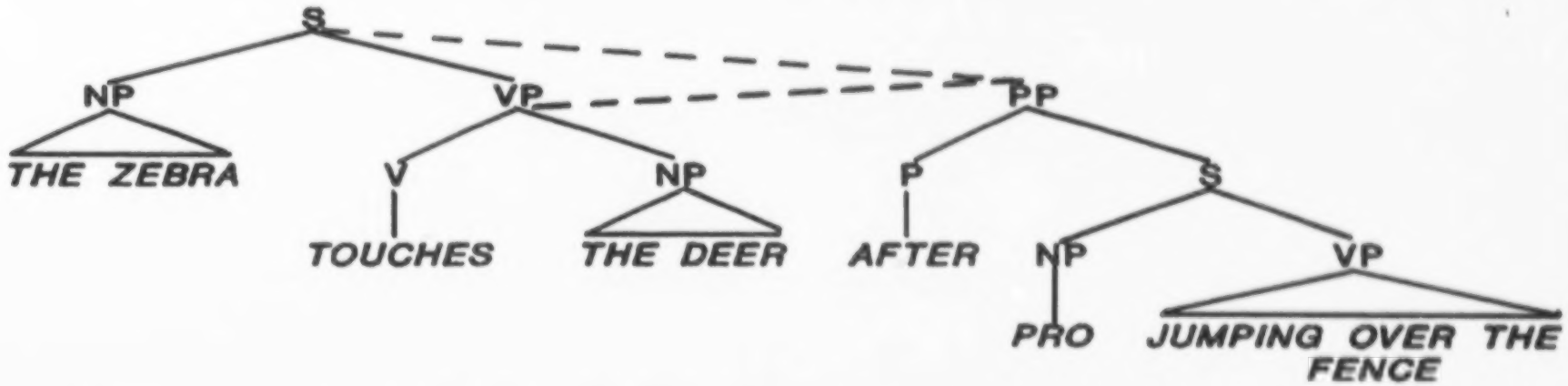
STAGE 3: OBJECT ORIENTED WITH EVIDENCE OF THE C-COMMAND CONSTRAINT ON CONTROL (OBJ/C-C): A PATTERN OF OBJECT CONTROL IN INTERPRETING SENTENCES SUCH AS (2) BUT SUBJECT CONTROL IN SENTENCES SUCH AS (4).

- OBJECT CONTROL IN (2) IS ATTRIBUTED TO A MISANALYSIS OF THE STRUCTURE OF THE SENTENCE WHEREBY THE ADJUNCT (*AFTER PRO JUMPING OVER THE FENCE*) IS INCORRECTLY ATTACHED TO THE VP.

- SUBJECT CONTROL IN (4) RESULTS FROM THE OPERATION OF THE C-COMMAND CONSTRAINT ON CONTROL. THE PRESENCE OF THE PREPOSITIONAL PHRASE MEANS THAT THE NP, *THE DEER*, DOES NOT C-COMMAND PRO REGARDLESS OF THE LEVEL OF ATTACHMENT OF THE ADJUNCT *(AFTER PRO JUMPING OVER THE* FENCE). THUS, THE NP, *THE DEER*, CANNOT BE THE CONTROLLER OF PRO IN SENTENCES SUCH AS (4).

- SENTENCES SUCH AS (4) WERE USED TO CALCULATE C-COMMAND SCORES, AN INDEX OF THE OPERATION OF THE C-COMMAND CONSTRAINT IN THE CHILD'S GRAMMAR.

STAGE 4: MIXED SUBJECT-OBJECT: A MIXED PATTERN OF SUBJECT AND OBJECT CONTROL ON SENTENCES SUCH AS (2). THE PATTERN IS ASSUMED TO RESULT FROM ALTERNATE ATTACHMENT OF THE ADJUNCT CLAUSE (*AFTER PRO JUMPING OVER THE FENCE*) TO EITHER THE S OR THE VP AS ILLUSTRATED BELOW.



STAGE 5: ADULT GRAMMARS: ADULT PATTERNS OF CONTROL ON SENTENCES SUCH AS (1), (2), AND (4) AS WELL AS CORRECT RESPONSES ON OS RELATIVE CLAUSES SUCH AS (3). MOST NORMAL 7 YEAR OLDS HAVE REACHED THIS STAGE.

QUESTIONS RELATED TO CONTROL, SLI CHILDREN, AND THE QUALITATIVE DIFFERENCE VS DELAY ISSUE

- WITH RESPECT TO THE INTERPRETATION OF PRO, DO SLI CHILDREN MANIFEST THE SAME STAGES THAT HAVE BEEN OBSERVED IN NORMAL CHILDREN?
- DO SLI CHILDREN MANIFEST THE SAME SEQUENCE OF STAGES OVER TIME THAT HAS BEEN OBSERVED IN NORMAL CHILDREN?
- DO SLI CHILDREN MANIFEST EVIDENCE OF THE C-COMMAND CONSTRAINT ON CONTROL?

METHOD

SUBJECTS AND METHODOLOGY

SUBJECTS: 6 LANGUAGE IMPAIRED CHILDREN WITH NORMAL HEARING, NORMAL IQ'S AND NO EVIDENCE OF GROSS NEUROLOGICAL DEFICITS WERE TESTED TWICE WITHIN A 9 TO 12 MONTH PERIOD. FORMAL CLASSIFICATORY CRITERIA SUCH AS THOSE SUGGESTED BY STARK & TALLAL (1981) WERE NOT USED. SUCH CRITERIA WILL BE USED IN FUTURE LARGE SCALE STUDIES.

LANGUAGE MEASURES OBTAINED IN BOTH TESTING SESSIONS: LANGUAGE SAMPLES WERE TAKEN AND DSS SCORES (LEE, 1974) WERE OBTAINED. 3 SUBTESTS OF THE CELF (2 COMPREHENSION TASKS AND 1 PRODUCTION TASK) WERE ADMINISTERED. FIVE PROBES ASSESSING COMPLEX STRUCTURES WERE ADMINISTERED FROM THE MULTILEVEL INFORMAL LANGUAGE INVENTORY.

LANGUAGE PROFILES: OVERALL,

- THE CHILDREN MANIFESTED A PROFILE OF EXPRESSIVE DIFFICULTIES WITH PARTICULAR PROBLEMS ON COMPLEX SENTENCES
- ALL SHOWED IMPROVEMENT IN THE SECOND TESTING SESSION.
- MANY OF THE SCORES IN BOTH SESSIONS FELL IN THE LOW NORMAL RANGE.

EXPERIMENTAL TASK & EXPERIMENTAL SENTENCES: THE CHILDREN ACTED OUT 42 COMPLEX SENTENCES WHICH INCLUDED:

- 12 TOKENS OF ADVERBIAL CLAUSE SENTENCES SUCH AS (2)
- 6 TOKENS OF OS RELATIVE CLAUSE SENTENCES SUCH AS (3)
- 6 TOKENS OF ADVERBIAL CLAUSE, PREPOSITIONAL PHRASE SENTENCES SUCH AS (4)

SCORING: RESPONSES ON THE ACT-OUT TASK WERE SCORED IN TERMS OF THE ANIMAL SELECTED AS THE **CONTROLLER** OF PRO OR THE ANTECEDENT OF THE RELATIVE PRONOUN *THAT*.

IDENTIFICATION OF THE CHILD'S STAGE IN INTERPRETING PRO: CRITERIA USED TO CLASSIFY NORMAL CHILDREN ACCORDING TO DEVELOPMENTAL STAGE WERE USED TO CLASSIFY THE LANGUAGE IMPAIRED CHILDREN. THE CRITERIA ARE OUTLINED BELOW.

CLASSIFICATORY CRITERIA FOR EACH STAGE
NUMBER OF SUBJECT AND OBJECT RESPONSES

CLASSIFICATORY CONSTRUCTIONS	NUMBER OF TOKENS	DEVELOPMENTAL STAGE 1	2&3*	4	5
ADVERBIAL CLAUSE SENTENCES SUCH AS (2)	12				
SUBJECT CONTROL		min 9	max 3	4 to 8	min 9
OBJECT CONTROL		max 3	min 9	75%	max 3
OS RELATIVE CLAUSE SENTENCES SUCH AS (3)	6				
SUBJECT ANTECEDENT		min 4	max 2	max 2	max 2
OBJECT ANTECEDENT		max 2	min 4	min 4	min 4

NOTE. 1 = SUBJECT ORIENTED; 2 & 3 = OBJECT ORIENTED WITH MINIMAL DISTANCE PRINCIPLE AND OBJECT ORIENTED WITH C-COMMAND COMBINED; 4 = MIXED; 5 = ADULT

* STAGES 2 AND 3 WERE DISTINGUISHED ON THE BASIS OF C-COMMAND SCORES ON SENTENCES SUCH AS (4). HIGH SCORES = 4 OR MORE SUBJECT RESPONSES; LOW SCORES = 0 TO 3 SUBJECT RESPONSES.

RESULTS

AGES, DSS SCORES AND DEVELOPMENTAL STAGES OF SLI CHILDREN COMPARED TO NORMAL CHILDREN

SUBJECT NUMBERS WERE ASSIGNED TO EACH SLI CHILD. THE NUMBERS REFER TO THE SAME CHILD ON ALL CHARTS.

KEY TO ABBREVIATIONS:

- SUBJECT - SUBJECT ORIENTED - STAGE 1
- OBJ/MDP - OBJECT ORIENTED WITH THE MINIMAL DISTANCE PRINCIPLE - STAGE 2
- OBJ/C-C - OBJECT ORIENTED WITH THE C-COMMAND CONSTRAINT ON CONTROL - STAGE 3
- MIXED - MIXED SUBJECT-OBJECT - STAGE 4
- ADULT - ADULT GRAMMAR WITH RESPECT TO THE EXPERIMENTAL SENTENCES - STAGE 5
- UNC - UNCLASSIFIABLE

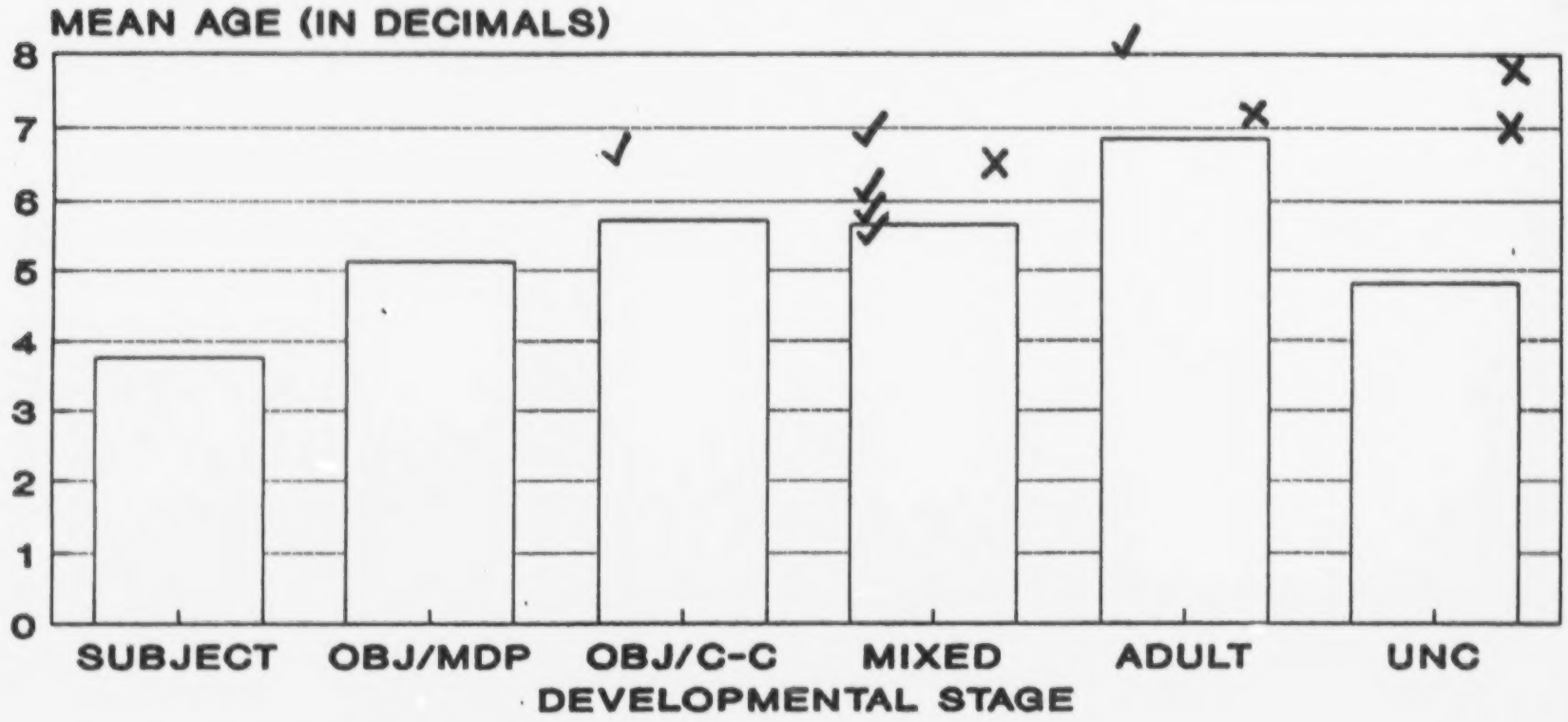
AGES AND DEVELOPMENTAL STAGES OF SLI CHILDREN AT TIMES 1 AND 2

SUBJECT NUMBER	TIME 1 AGE	TIME 1 STAGE	TIME 2 AGE	TIME 2 STAGE
1	5;8	MIXED	6;6	MIXED
2	6;0	MIXED	7;0	UNC
3	6;6	OBJ/C-C	7;3	ADULT
4	6;10	MIXED	7;10	UNC
5	5;6	MIXED	nt	-
6	8;0	ADULT	nt	-

NOTE. Ages are in months; nt = not tested

- ALL CHILDREN MANIFESTED A CLASSIFIABLE RESPONSE PATTERN AT TIME 1
- AMONG THE 4 CHILDREN WHO RETURNED, ONLY 2 MANIFESTED A CLASSIFIABLE RESPONSE PATTERN AT TIME 2

MEAN AGES OF CHILDREN MANIFESTING EACH DEVELOPMENTAL STAGE



- IN GENERAL, THE SLI CHILDREN MANIFESTING THE MIXED OR OBJECT ORIENTED WITH C-COMMAND STAGES WERE SLIGHTLY OLDER THAN NORMAL CHILDREN MANIFESTING THE SAME DEVELOPMENTAL STAGES IN THEIR INTERPRETATION OF PRO. HOWEVER, THE AGES OF THESE SLI CHILDREN DID FALL WITHIN THE AGE RANGE OF NORMAL CHILDREN MANIFESTING THE SAME DEVELOPMENTAL STAGE.

- THE TWO SLI CHILDREN WHO BECAME UNCLASSIFIABLE AT TIME 2 WERE MUCH OLDER THAN NORMAL CHILDREN WHO WERE UNCLASSIFIABLE.

- IN GENERAL, THE SLI CHILDREN'S DEVELOPMENTAL STAGE IN THE INTERPRETATION OF PRO IS SLIGHTLY BELOW THE STAGE EXPECTED ON THE BASIS OF THEIR AGE.

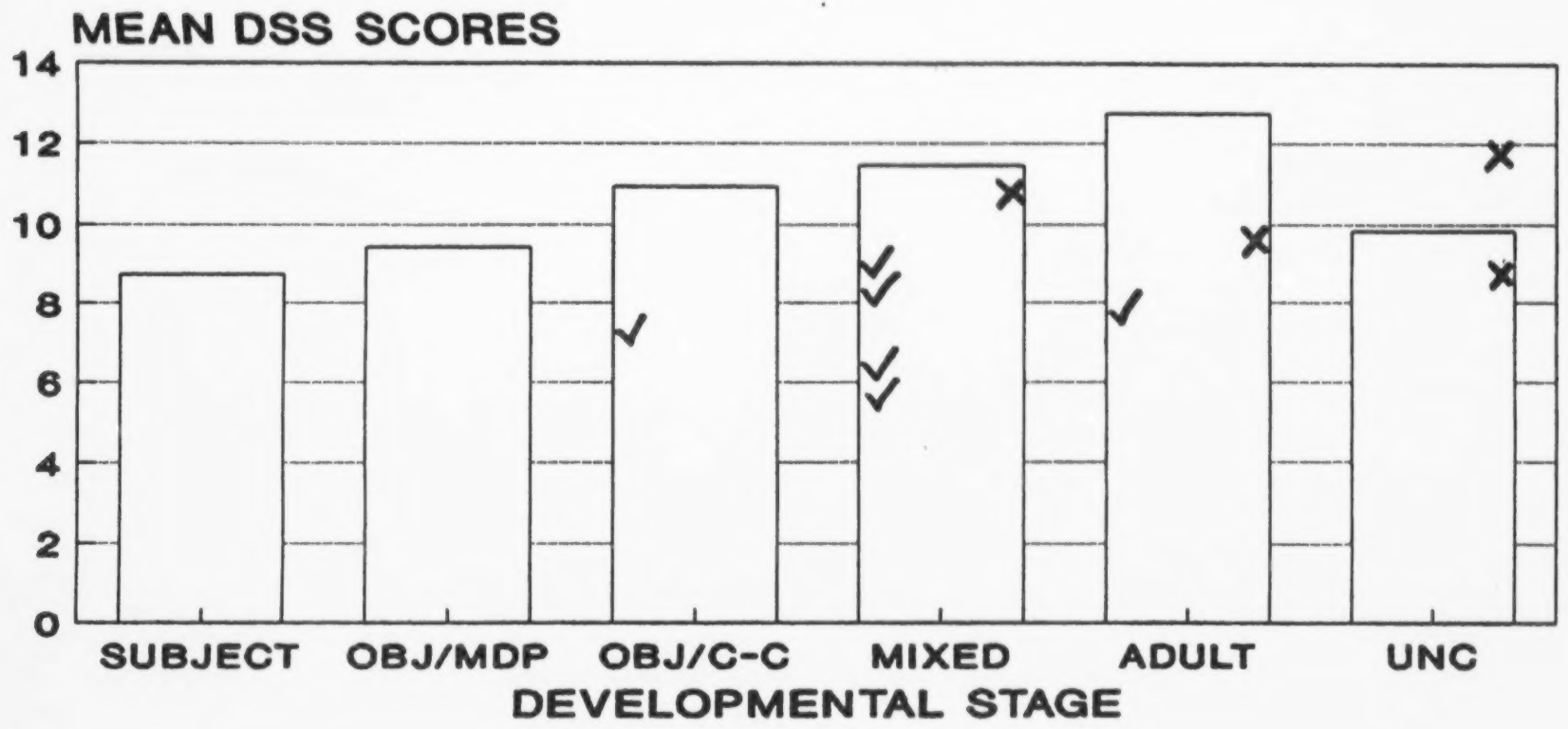
DSS SCORES, %ILE RANK, & DEVELOPMENTAL STAGES OF SLI CHILDREN AT TIMES 1 AND 2

SUBJECT NUMBER	TIME 1 DSS	TIME 1 % RANK	TIME 1 STAGE	TIME 2 DSS	TIME 2 % RANK	TIME 2 STAGE
1	8.00	<25	MIXED	10.68	<50	MIXED
2	6.04	<10	MIXED	8.72	P=10	UNC
3	7.04	<10	OBJ/C-C	9.44	P>10	ADULT
4	8.70	P<10	MIXED	11.94	P>25	UNC
5	5.64	<10	MIXED	nt	--	--
6	7.74	P<10	ADULT	nt	--	--

NOTE. < = less than; > = greater than; P = projected rank

- DSS SCORES IMPROVED FROM TIME 1 TO TIME 2 FOR ALL CHILDREN
- USING PROJECTED SCORES, THERE APPEARED TO BE SLIGHT TO MODERATE IMPROVEMENTS IN THE PERCENTILE RANKS OF THE DSS SCORES

MEAN DSS SCORES OF CHILDREN MANIFESTING EACH DEVELOPMENTAL STAGE



- THE DSS SCORES OF THE SLI CHILDREN CLASSIFIED AS OBJECT ORIENTED WITH C-COMMAND, MIXED AND ADULT TENDED TO FALL SLIGHTLY BELOW THE MEAN DSS SCORES FOR NORMAL CHILDREN MANIFESTING THE SAME DEVELOPMENTAL STAGE.

- TWO SLI CHILDREN (ONE MIXED AND ONE OBJECT ORIENTED WITH C-COMMAND) MANIFESTED DSS SCORES THAT FELL BELOW THE RANGE OF DSS SCORES FOR NORMAL CHILDREN MANIFESTING THESE STAGES. ALL OTHER DSS SCORES FELL WITHIN THE RANGE OF DSS SCORES FOR NORMAL CHILDREN MANIFESTING THE SAME STAGE.

- IN GENERAL, SLI CHILDREN APPEAR TO MANIFEST DEVELOPMENTAL STAGES IN THEIR INTERPRETATION OF PRO THAT ARE SLIGHTLY ABOVE THE STAGES EXPECTED ON THE BASIS OF THEIR DSS SCORES.

- SINCE THE ACT-OUT TASK WAS A COMPREHENSION TASK AND DSS SCORES ARE BASED ON A PRODUCTION TASK, COMPREHENSION APPEARS TO BE MORE ADVANCED THAN WOULD BE EXPECTED FROM THE CHILDREN'S PRODUCTIVE LANGUAGE.

COMPARISON OF LONGITUDINAL DATA FOR NORMAL AND SLI CHILDREN

USING AN ACT-OUT TASK, HSU AND CAIRNS (1990) CONDUCTED A LONGITUDINAL STUDY OF 21 NORMAL CHILDREN.

LONGITUDINAL CHANGES IN THE DEVELOPMENTAL STAGES MANIFESTED BY NORMAL AND SLI CHILDREN ARE REPORTED BELOW:

DEVELOPMENTAL STAGES OF NORMAL & SLI CHILDREN TESTED AT TWO TIME PERIODS

UNCLASSIFIABLE CHILDREN					CLASSIFIABLE CHILDREN				
INTERVIEWS			N	TIME INTERVAL	INTERVIEWS			N	TIME INTERVAL
1		2			1		2		
NORMALS									
UNC	->	UNC	3	2	SUBJECT	->	SUBJECT	2	2
UNC	->	SUBJECT	1	2	MIXED	->	MIXED	2	2
SUBJECT	->	UNC	1	2	ADULT	->	ADULT	1	2
UNC	->	OBJ/MDP	1	2	OBJ/MDP	->	SUBJECT	1	2
OBJ/MDP	->	UNC	1	2	OBJ/MDP	->	MIXED	2	9
					OBJ/C-C	->	MIXED	1	2
					OBJ/MDP	->	ADULT	3	9
					MIXED	->	ADULT	2	2
TOTAL			7					14	
SLI									
MIXED	->	UNC	2	12	MIXED	->	MIXED	1	10
					OBJ/C-C	->	ADULT	1	9
TOTAL			2					2	

NOTE. N = NUMBER OF CHILDREN; 2 SLI CHILDREN WHO WERE MIXED AND ADULT AT TIME 1 WERE NOT RETESTED AT TIME 2

TIME INTERVAL IS IN MONTHS

- ALL NORMAL CHILDREN TESTED IN A 9 MONTH INTERVAL MANIFESTED A CHANGE IN DEVELOPMENTAL STAGE THAT WAS CONSISTENT WITH THE PREDICTED SEQUENCE OF STAGES IN CHILDREN'S INTERPRETATION OF PRO.
- ONLY 1 OF THE SLI CHILDREN OF THE 4 WHO WERE RETESTED MANIFESTED A CHANGE IN DEVELOPMENTAL STAGE.
- 7 OF THE NORMAL CHILDREN (33% OF THE TOTAL) WERE UNCLASSIFIABLE ON AT LEAST ONE OF THE TESTING SESSIONS. 2 OF THESE CHILDREN CHANGED FROM CLASSIFIABLE TO UNCLASSIFIABLE WHEN RETESTED. THIS REPRESENTED 9% OF THE TOTAL NUMBER OF NORMAL CHILDREN TESTED.
- ALMOST ALL OF THE UNCLASSIFIABLE NORMAL CHILDREN WERE AMONG THE 3 YEAR OLDS PARTICIPATING IN THE STUDY.
- 2 OUT OF THE 4 SLI CHILDREN (50%) CHANGED FROM MIXED TO UNCLASSIFIABLE.
- THE UNCLASSIFIABLE SLI CHILDREN WERE MUCH OLDER THAN UNCLASSIFIABLE NORMAL CHILDREN
- IN GENERAL, SLI CHILDREN APPEAR TO MANIFEST AN INSTABILITY IN THEIR RESPONSE PATTERNS THAT APPEARS TO BE CHARACTERISTIC OF YOUNGER NORMAL CHILDREN.

CONCLUSIONS

- THE RESULTS OF THIS PRELIMINARY PILOT PROJECT SUGGEST THAT SOME SLI CHILDREN MAY MANIFEST DEVELOPMENTAL STAGES CHARACTERISTIC OF NORMALLY DEVELOPING CHILDREN.
- THESE CHILDREN MAY GO THROUGH THE SAME DEVELOPMENTAL STAGES BUT AT LATER AGES.
- LONGER TIME INTERVALS ARE REQUIRED FOR CHANGE AND RESPONSE PATTERNS MAY BE UNSTABLE.
- FOR SOME SLI CHILDREN, MIXED AND UNCLASSIFIABLE RESPONSE PATTERNS MAY PERSIST INTO EARLY CHILDHOOD. THE PERSISTENCE OF UNCLASSIFIABLE PATTERNS IS NOT CHARACTERISTIC OF NORMAL CHILDREN.
- THERE IS A NEED FOR A LARGE SCALE STUDY OF SLI CHILDREN'S INTERPRETATION OF PRO.

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